

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number
WO 2004/002634 A1

- (51) International Patent Classification⁷: **B05D 3/02**
- (21) International Application Number: PCT/US2003/020770
- (22) International Filing Date: 1 July 2003 (01.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/392,878 1 July 2002 (01.07.2002) US
- (71) Applicant: **THOMAS STEEL STRIP** [US/US]; Corus Special Strip, Delaware Avenue N.W., Warren, OH 44485 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **BRILMYER, George, H.** [US/US]; Corus Special Strip, Delaware Avenue N.W., Warren, OH 44485 (US). **GREEN, James, F.** [US/US]; Corus Special Strip, Delaware Avenue N.W., Warren, OH 44485 (US). **MILLER, Robert, G.** [US/US]; Corus Special Strip, Delaware Avenue N.W., Warren, OH 44485 (US). **KOTSATOS, Stella, C.** [US/US]; Corus Special Strip, Delaware Avenue N.W., Warren, OH 44485 (US).
- (74) Agents: **GRANT, Stephen, L.** et al.; Hahn Loeser + Parks LLP, Twin Oaks Ezstate, 1225 West Market Street, Akron, OH 44313-7188 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: CORROSION RESISTANT COATINGS AND METHOD OF PRODUCING

(57) **Abstract:** Metallic coatings and alloys are deposited by thermally reducing inorganic or organic salts containing one or more metals and/or other cationic species in a reducing atmosphere at elevated temperatures. This environmentally-friendly deposition process enables a wide variety of metal and metal alloy compositions to be formed, including metallic or alloy deposits that could not otherwise be electroplated out of water-based solutions. This thermal reduction process and the deposits produced thereof can be applied onto flat strips, sheets, or plates for subsequent fabrication into components and devices and or onto formed parts as intermediate or final surface treatments, particularly components such as battery cans.

WO 2004/002634 A1